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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,607	12/27/2000	William Williams	CSCO-96941	1311

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EXAMINER

NGUYEN, CINDY

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 03/19/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/752,607

Applicant(s)

WILLIAMS, WILLIAM

Examiner

Cindy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 10 February 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

This is in response to amendment filed 02/10/03.

#### **1. Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

#### **2. Claims 1-3, 6, 7, 12-16 and 20-22 stand rejected under 35 U.S.C. 102(b) as being anticipated by Belsan et al. (U.S 5403639) (Belsan).**

Regarding claims 1 and 20, Belsan disclose: A method and an apparatus of archiving a database (col. 7, lines 5-30, Belsan), comprising the steps of: storing a plurality of archive logs comprising a plurality of transactions (as copies of data records and to dynamically move the data records) on a host device (col. 7, lines 30-41, Belsan);

transmitting a plurality of asynchronous streams to a receiving device, wherein the asynchronous streams correspond to a plurality of the archive logs (col. 7, lines 42-62, Belsan).

an archive database that is updated with received transactions (col. 7, lines 1-42, Belsan).

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Regarding claim 12, Belsan disclose: An archival system, comprising: a backup database (100, fig. 2 and corresponding text, Belsan)for storing a plurality of archive logs which represent data stored on an operational database (122-1 to 122-n+m, fig. 2 and corresponding text, Belsan);

a memory (113, fig. 2 and corresponding text, Belsan)for storing instructions on how data is to be transferred from the operational database to the backup database, wherein the instructions include commands which cause the operational database to stream a plurality of archive logs asynchronously to be copied over to the backup database (col. 11, lines 11-25, Belsan) such that backup database that is updated with the data (col. 7, lines 1-42, Belsan).

Regarding claim 14, Belsan disclose: A computer-readable medium having stored (103, fig. 2 and corresponding text, Belsan) thereon instructions for transferring data from a host device to a destination device for archival of data (col. 11, lines 24-29, Belsan), comprising the steps of:

storing a plurality of archive logs comprising a plurality of transactions on the host device(col. 7, lines 30-41, Belsan);

transmitting a plurality of asynchronous streams to the destination device, wherein the asynchronous streams correspond to a plurality of the archive logs (col. 7, lines 42-62, Belsan).

Updating the destination device with plurality of transactions (col. 7, lines 1-42, Belsan).

Regarding claims 2, 15 and 21, all the limitations of these claims have been noted in the rejection of claims 1, 14 and 20, respectively. In addition, Belsan disclose: wherein the plurality of asynchronous streams are transmitted simultaneously (col. 46, lines 46-51, Belsan).

Regarding claims 3, 13, 16 and 22, all the limitations of these claims have been noted in the rejection of claims 1, 12, 14 and 21, respectively. In addition, Belsan disclose: further comprising the steps of: comparing a plurality of files corresponding to a backup database to a plurality of files of a host database to determine whether there are any corrupt or missing files (609, 610, fig. 7 and corresponding text, Belsan);

automatically transferring files from the host database to the backup database which have been corrupted or deleted (617, fig. 6 and corresponding text, Belsan).

Regarding claim 6, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Belsan disclose: further comprising the step of running streaming rsynchs for copying data from the host device to the receiving device (col. 35, lines 47-66, Belsan).

Regarding claim 7, all the limitations of this claim have been noted in the rejection of claim 1. In addition, Belsan disclose: further comprising the step of constructing an array of the plurality of archive logs which are to be transferred from the host device to the receiving device (col. 28, line 66 to col. 29, lines 10, Belsan).

### **3. *Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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**4. Claims 4, 8-10, 17-19, 23 and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Belsan et al. (U.S 5403639) (Belsan) in view of Browne (U.S RE37857).**

Regarding claim 4, all the limitations of this claim have been noted in the rejection of claim 1. However, Belsan didn't disclose: further comprising the step of transmitting a predetermined number of streams in parallel, wherein the number is set by a user in a config file. On the other hand, Browne disclose: further comprising the step of transmitting a predetermined number of streams in parallel (col. 8, lines 8-17, Browne), wherein the number is set by a user in a config file (col. 11, lines 8-16, Browne). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include step of transmitting the number of streams in parallel by a user in a config file in the system of Belsan as taught by Browne. The motivation being enable the user to transmit many files in the file system faster and avoid corrupt data by system crash.

Regarding claims 8 and 23, Belsan/Browne disclose: A method and an apparatus of performing automatic recoveries on an archived database (col. 11, lines 26-54, Belsan), comprising the steps of:

comparing files residing on a host device to files residing on a backup device (603, fig. 6 and corresponding text, Belsan);

determining whether there are any missing files by checking for files which exist on the host device and which do not exist on the backup device (609, fig. 7 and corresponding text, Belsan);

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determining whether there are any corrupted files by checking for files which have a different size on the host device as compared to corresponding file residing on the backup device (col. 35, line 60 to col. 36, line 3, Belsan);

recopying files from the host device to the backup device which have become corrupted, wherein the automatic recovery process is run by a program without human intervention (col. 35, lines 47-55, Belsan);

recopying files from the host device over to the backup device which are missing (col. 7, line 63 to col. 8, line 2, Browne). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the step of recopying for the backup device when the files are missing in the system of Belsan as taught by Browne. The motivation being to enable the user to backup database without missing data during the transaction.

Regarding claim 17, Belsan/Browne disclose: A computer-readable medium having stored (103, fig. 2 and corresponding text, Belsan) thereon instructions for performing automatic recoveries on an archived database (col. 11, lines 24-29, Belsan), comprising the steps of:

comparing files residing on a host device to files residing on a backup device (603, fig. 6 and corresponding text, Belsan);

determining whether there are any missing files by checking for files which exist on the host device and which do not exist on the backup device (609, fig. 7 and corresponding text, Belsan);

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determining whether there are any corrupted files by checking for files which have a different size on the host device as compared to corresponding file residing on the backup device (col. 35, line 60 to col. 36, line 3, Belsan);

recopying files from the host device to the backup device which have become corrupted, wherein the automatic recovery process is run by a program without human intervention (col. 35, lines 47-55, Belsan);

recopying files from the host device over to the backup device which are missing (col. 7, line 63 to col. 8, line 2, Browne).

Regarding claims 9, 18 and 24, all the limitations of these claims have been noted in the rejection of claims 8, 17 and 23, respectively. In addition, Belsan/Browne disclose: further comprising the step of transferring a plurality of files simultaneously from the host device to the backup device (col. 28, line 66 to col. 29, line 10, Belsan).

Regarding claims 10 and 19, all the limitations of these claims have been noted in the rejection of claims 9 and 17, respectively. In addition, Belsan/Browne disclose: wherein the plurality of files are streamed according to an rsync command (col. 35, lines 60-66, Belsan).

**5. Claim 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Belsan et al. (U.S. 5403639) (Belsan) in view of Nielsen (5812398).**



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Regarding claim 5, all the limitations of this claim have been noted in the rejection of claim 1. However, Belsan didn't disclose: wherein the transmitting step runs in cron. On the other hand, Nielsen discloses: wherein the transmitting step runs in cron (col. 7, line 14 to col. 8, lines 11, Nielsen). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the transmitting step runs in cron in the system of Belsan as taught by Nielsen. The motivation being to enable the user to maintain the system which indicates that the backup routine should be run at specified intervals.

**6. Claim 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Belsan et al. (U.S 5403639) (Belsan) in view of Browne (U.S RE37857) and further in view of Nielsen (5812398).**

Regarding claim 11, all the limitations of this claim have been noted in the rejection of claim 8. However, Belsan/Brownse didn't disclose: wherein the comparing step comprises the step of performing a rolling checksum. On the other hand, wherein the comparing step comprises the step of performing a rolling checksum (col. 34, line 65 to col. 35, line 15, Nielsen). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the step of checksum in the combination system of Belsan/Brownse as taught by Nielsen. The motivation being to enable the user to transmit data in the file system faster and avoid corrupt data by system crash.

**7. *Response to Arguments (filed 02/10/03)***

Applicant argues: Belsan doesn't disclose: transmitting a plurality of asynchronous streams to a receiving device wherein the asynchronous streams correspond to a plurality of the archive logs. In response, Belsan discloses transmitting a plurality of asynchronous streams to a

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receiving device wherein the asynchronous streams correspond to a plurality of the archive logs as transmit a plurality of versions of data records to a archive memory at col. 7, lines 1 to col. 8, lines 5.

Applicant argues: Belsan doesn't disclose: an archive database that is updated with received transactions. In response, Belsan discloses: an archive database that is updated with received transactions at col. 7, lines 1-42.

Applicant argues: Belsan doesn't disclose: automatic recovery in an archive database where files are physically copied to a backup database. In response, Belsan discloses: automatic recovery in an archive database where files are physically copied to a backup database at col. 2, lines 55 to col. 3, lines 10.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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### **8. Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CN

Cindy Nguyen  
March 10, 2003

  
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